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ABSTRACT

The word sort is a technique which capitalizes upon a child's natural feature analysis abilities. In a word sort the learner physically arranges words printed on small cards into groups. This technique can be used in many ways to help children draw conclusions about how words are related. There are two types of sorts: in "closed sorts" the criterion which the words in a group must share is stated in advance; in "open sorts" no criterion is stated. Word sorts are most effectively introduced in small groups of eight to ten children. Once the mechanics of sorting have been established through the use of picture cards, the teacher can initiate a closed sort focusing on a specific word feature illustrated by one of the cards. Next the teacher may introduce word card sorts, again using picture cards as key words. Finally, the teacher can introduce the open sort concept. Word sorts can be used equally well with advanced readers They can also be used as games, thus presenting a viable alternate to traditional word study programs. Word sorts are flexible enough to be used with individuals and groups, with teacher direction or as independent activites. They grow with the children. (FL)

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WORDS, KIDS, AND CATEGORIES

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Running Head: Categories

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WORDS, KIDS, AND CATEGORIES

Categorization, the grouping together of different stimuli into classes based on common properties, is one of the most fundamental human cognitive activities. The ability to treat different stimuli as equivalent is intimately involved with the formation of concepts, our organized units of knowledge.

There appear to be a number of reasons why categorization serves human thinking so well. Anglin (1977) has called categorization "a ubiquitous cognitive activity" (p. 2) which research indicates is involved in concept formation as well as in perception, memory, problem solving, and almost all linguistic behavior.

According to Anglin, Bruner, Goodnow and Austin (1956), Piaget (1952) and others, categorizing objects and events allows us to create order in a world which bombards our senses with input. When we recognize similarities in objects or events, we can relate them and consequently create groups or categories of similar things. In this way new things do not remain forever unique, but can be considered in relation to everything else that is already familiar.

Perhaps most important for the development of new knowledge, when we can classify an object (or event or idea) as being like some others, we can form generalizations about the properties of all the members of the category and use these generalizations to form hypotheses about new experiences. In short, we can use

information about the environment to form expectations about how things and forces may be related. Thus we can not only make order, and sense, of what has been experienced, but can meet new stimuli with strategies for making sense of them and with hypotheses about how they ought to behave and relate to the rest of the world.

Experts in the field of child development (Bruner, Olver & Greenfield, 1966; Inhelder & Piaget, 1964; Hunt, 1961; White, 1975) agree that a major aspect of children's cognitive growth is their powerful and autonomous drive to explore, experience and make sense of their environment. Right from the first weeks of life, children are extremely active builders of cognitive categories. They acquire almost all their knowledge and store of concepts by interaction with people, things, events and language rather than by imitation or passive observation (Sinclair-de Zwart, 1973). Children do not internalize pre-set categories, but discover and create categories themselves, a process which seems to proceed in orderly and predictable stages (Anglin, 1977; Inhelder & Piaget, 1964).

Categorization appears to be one of the most basic and powerful operations of human thinking, responsible for much of children's natural learning. In particular, categorization is intimately involved in language acquisition and the formation of verbal concepts (Anglin, 1977; Inhelder & Piaget, 1964; Nelson, 1974).

A clear implication of this is that children should be

provided with opportunities to exercise and develop categorization abilities in school, particularly in instruction aimed at helping children develop word knowledge.

In reading instruction, much of our time is spent trying to help children develop strategies for recognizing words in print and analyzing those they do not immediately recognize. We often forget that children have well-developed feature analysis abilities when they begin to learn to read, and that they can and do search for similarities in things, categorize them and draw generalizations and inferences about new things which might also fit those categories. We believe we can productively put those abilities to use in the classroom.

In teaching reading we can help children organize and extend their natural ability to discern features distinguishing one word from others, thus expanding their understanding of how words are related. This is accomplished by systematically providing opportunities for them to study and categorize words themselves. In doing so, we capitalize upon children's most natural form of learning, and guide them in the processes of feature analysis and induction. These enable them to recognize new words and written language structures (Temple & Gillet, 1978).

A vehicle for this kind of systematic word study is the word sort. In a word sort a child or group of children categorizes words written on cards by physically grouping them. The features a word may have in common with others can be shared letters, similarities in letter sounds, structural elements,

grammatical functions, or meaning relations. All of these features are important in the development of word recognition and word analysis.

Word sorts differ from more traditional word recognition/analysis methods in that in sorting children are led to discern for themselves the features words have in common, rather than being told how words are similar and expected to remember and apply these pre-set rules. The discovery of relationships is congruent with the way children learn naturally and extends logically to instruction in reading words.

There are two basic types of sorts. In "closed sorts", the criterion which the words in a group must share is stated in advance of sorting. Groups are formed of examples of that feature, for instance words with the same initial letter, the same vowel sound or which derive from the same base word. In "open sorts" no criterion is stated in advance. Rather, word groups are formed as a body of words is examined and relationships suggest themselves naturally. In closed sorts, the children search for instances of a shared feature, and exercise convergent thinking and deduction; in open sorts, children consider several features simultaneously and search for those which are shared by other words, exercising divergent thinking and induction. Both types of sorts are dynamic, creative word study activities which encourage children to study words critically, and are powerful tools in helping children organize what they know about words and form generalizations they can productively apply to unknown

words.

How To Begin Word Sorts

As with any new activity, word sorts are most effectively introduced in small groups of eight to ten children. Initially the word sort activity should be highly structured so that confusion over procedures is minimized, thus allowing the children to comfortably come to an understanding of the categorizing task.

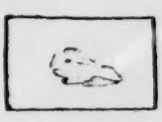
With beginning readers, it is fruitful to begin by giving the children picture cards to sort into categories. This provides them with the experience of physically placing cards into categories based on their judgments of how things go together. This task could involve such things as sorting vegetables from fruits, or farm animals from zoo animals.

Once the mechanics of sorting are established using the pictures, the teacher can initiate sorts which focus on a specific word feature. In the beginning stages features which are sound-based are most frequently of concern. For instance, if the teacher wishes to introduce the initial blends br and fr, she might begin by conducting an auditory lesson, requiring the student to discriminate between these initial sounds when given pairs of words. This type of experience offers the children the opportunity to manipulate the word feature auditorily. Once they can successfully do this, the teacher can begin the actual word sort activity in the reading circle.

In this initial closed task, the teacher sets the categories

using picture cards which serve as key words. In the example above, pictures of a broom and a frog might serve as category labels. Seated on the floor, each of the children in circle receives a number of picture cards which will fit by initial sound into one of the two categories, either br or fr. A miscellaneous category should be included in which the children can place any card of which they are uncertain. At their places in circle, the children then individually sort their cards into categories designated by the key cards. At this stage it is important to use pictures rather than words. This necessitates that the child rely on an internalization of the concept of initial sound rather than on a visual matching of letters.

Once the children can easily sort the pictures into the appropriate categories, the teacher may introduce sorting with word cards. Since it is essential that children work with words they already recognize, sight words are used. Categories are again established by the teacher using picture cards as key words. The teacher distributes the word cards and the children, at their places in circle, individually sort the word cards into piles as they did with the picture cards. For example,



brick

brave

fruit

friend

ball

As children place the cards into the categories, the teacher

can easily note how they are sorting. This permits her to give the student immediate feedback concerning the grouping of the cards, and provides the teacher with information about the youngster's mastery of the particular skill.

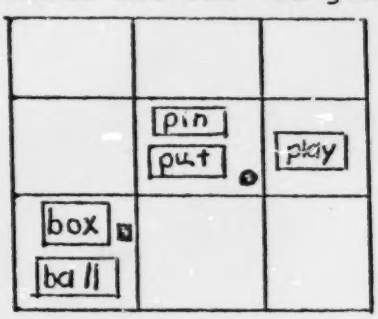
Having reached this point, the children are familiar and comfortable with the mechanics of sorting. The teacher can now break the reading circle into smaller groups of approximately three to four children. Word cards are distributed to each, and their task is to sort their cards into categories according to any criterion they choose. In this open sort game, "Guess My Group", each of the children receives ten word cards which are sorted into as many categories as possible. Once they have created their categories, students must try to guess how the others in the group have sorted their cards. If cards remain unsorted, they may try to play them on another's category, using induction to determine what the criterion may be. This type of open sort is also a useful diagnostic tool. During the activity the teacher can observe the diverse types of sorts the children are making spontaneously. One child may sort by initial sounds, while another more advanced child may sort according to vowel sounds or number of syllables. Information like this is useful in planning future word study instruction and activities.

Word sorts can be used equally well with more advanced readers. As the children's reading ability improves and their word knowledge grows, sort activities can be used to explore vowel and spelling patterns, word meanings, etymological deriv-

ations and parts of speech.

Extensions: Word Sort Games

Reading circle instruction can be extended using the format of board and card games. An example of this is a modification of tic-tac-toe. A game board is made by dividing a piece of cardboard into nine equal sections. One word card is placed in each section. Players are given eight word cards and plastic or similar markers. Children then take turns attempting to sort one of their cards with one of the cards on the board, forming a category by any word feature they find. If a child or team of children can do so successfully, a marker is placed on that square. Play continues until someone wins the game, getting three markers in a row as in the usual tic-tac-toe game.



A card game based on Concentration can be adapted to word sort activities. All that is needed is a deck of word cards. After the cards are shuffled, sixteen are placed face down on the table. Each player turns over two cards and attempts to sort or put the words together in some way, by beginning sound, number of syllables, or meaning, for example. If the player can justify the sort and the others accept it, the child can pick up

the two cards, then turn over two more. If on the next try a sort cannot be made, the child replaces the cards face down and another player goes through the procedure. The player with the most cards picked up is the winner.

Other card game variations can be played using the formats of Rummy, Fish, and Old Maid. In each of these, rather than simply matching pairs of word cards, children categorize according to salient word features.

Thus word sorts are a viable alternative to traditional word study programs used in many classrooms. In several ways, they are more advantageous. Rather than specifying the sequence of particular word features to be taught, word sort activities allow children to demonstrate what they already know, what they are learning and to what they yet need exposure. These fundamental categorization activities allow children to form generalizations about how words are related, using not only phonic features but the equally important relationships of structure, grammatical function and meaning. And with generalizations formed about these relationships, children can productively apply their understanding of words to new words as they encounter them.

Word sorts provide an opportunity for children to teach and learn from each other while discussing and examining words together. This is a critical aspect of learning which is not present when children spend most of their word study time individually completing worksheets.

Word sorts also make economical use of teacher time and

materials. There are no dittos to run off or correct. Instead, the teacher's time is spent directly teaching and diagnosing. The only materials needed are index cards. And finally, word sort activities are flexible enough to be used with individuals and groups, with teacher direction or as independent activities. They "grow" with the children, from early pre-readers to fluent mature readers; from young children's vocabularies limited by their experience with the world to the widely differentiated, precise vocabularies and word knowledge of adults.

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